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Bernd Riedl

BAYER-15 P4

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MILLEN, WHITE, ZELANO & BRANIGAN, P.C:
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ARLINGTON, VA 22201

EXAMINER

DESAI, RITA J

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Please find below and/or attached an Office communication concerning this application or proceeding.

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EXAMINER

Rita J.. Desai

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1625

20071113-A-A

DATE MAILED:

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Commissioner for Patents

Response to the Reply Brief

R. Desai
11/12/07

Rita J. Desai
Primary Examiner
Art Unit: 1625

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Response to the Reply Brief

This is in response to the reply to the Appellant's Reply Brief filed 8/16/07.

The response is to the arguments presented by the Appellants.

Appellants set of claims are drawn to compounds and claim drawn to treating osteoporosis and inflammation in a mammal, by administering an "effective" amount of the compound of claim

1.

Thus the examiner has examined the claims with respect to the claims presented.

An effective amount would be able to "treat" a disease in a mammal and the specifications are not enabled to treat any disease.

Applicants are arguing that the scope of the compounds is broader and not limited to treating just osteoporosis and inflammation.

According to the specifications on page 100, the in-vivo assay applicants have an experiment to measure the tumor size, however no data as to what happens to the tumor after the doses are given.!

CD1 nu/nu mice (6-8 weeks old) are injected subcutaneously into the flank at 1×10^6 cells with human colon adenocarcinoma cell line. The mice are dosed i.p., i.v. or p.o. at 10, 30, 100, or 300 mg/Kg beginning on approximately day 10, when tumor size is between 50-100 mg. Animals are dosed for 14 consecutive days; tumor size is monitored with calipers twice a week.

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Applicants further state that inhibitory effect can be further demonstrated in-vivo according to the technique of Monia et al. 1996 Nat. Med.

However again no data has been provided.

This is just speculation and the burden of testing would be an undue burden.

It is well known that treating tumors and cancer is highly unpredictable.

It depends not only on the types of cells but also changes in-vivo.

Applicants just have some assays and a theory that these compounds would have a certain activity. There does not appear to be a reduction to practice at the time of the invention.

Applicants assertion on page 2 that it can treat all cancers is also not enabled.

There are so many types of cancer. The art of clinical oncology, no compound has yet shown clinical efficacy against every type of cancer. To quote Salmon (Principles of Cancer Therapy) in the paragraph on page 1038 titled "Medical Therapy", "[c]urative therapy has been developed for a series of relatively uncommon neoplasms and useful palliative therapy has been developed for some common forms of cancer (Table 162-4). With rare exceptions, effective therapy has utilized combinations of anticancer drugs." Applicant's attention is drawn to Tables 162-6, 162-7, 162-8, 162-162-9, 162-10, and the material on pages 1045-1046 titled "Miscellaneous Anticancer Agents" in Salmon (Principles of Cancer Therapy). Different agents are used for different specific forms of cancer and no single agent is listed as a treatment of every single type of cancer. To quote Balasubramanian (Recent Developments in Cancer Cytotoxics) from page 151 first paragraph "[t]he successful treatment of solid tumors remains a formidable challenge. The partial success of traditional cancer chemotherapy...". On page 158, second paragraph Balasubramanian (Recent Developments in Cancer Cytotoxics) states: "The future scenario in

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clinical management of cancer will be mainly dictated by the availability of less toxic and tumor selective agents". No compound has shown clinical efficacy against all cancers, thus no *in vivo* or *in vitro* assay could be validated for the identification of such a general agent. Applicants' specification logically must lack such assay data.

Thirdly, according to Stedman there over two hundred such tumorous conditions, including, "acinar cell tumors a solid and cystic tumors of the pancreas, occurring in young women; tumors cells contain zymogen granules. Acoustic tumors, vestibular schwannoma, acute splenic tumors acute splenitis, enlargement, and softening of the spleen, usually due to bacteremia or severe bacterial toxemia. Adenoid tumors adenoma, or neoplasm with gland like spaces. Adenomatoid tumors a small benign tumors of the male epididymis and female genital tract, consisting of fibrous tissue or smooth muscle enclosing anastomosing gland-like spaces containing acid mucopolysaccharide lined by flattened cells that have ultra-structural characteristics of mesothelial cells, benign mesothelioma of genital tract tumors, adenomatoid odontogenic tumors a benign epithelial odontogenic tumors appearing radiographically as a well-circumscribed, radiolucent-radiopaque lesion usually surrounding the crown of an impacted tooth in an adolescent or young adult; characterized histologically by columnar cells organized in a duct like configuration interspersed with spindle-shaped cells and amyloidlike deposition that gradually undergoes dystrophic calcification, adenoameloblastoma, ameloblastic adenomatoid tumors. Adipose tumors, lipoma, ameloblastic adenomatoid tumors, adenomatoid odontogenic tumors. Amyloid tumors, nodular amyloidosis, aortic body tumors, chemodectoma, Bednar tumors, pigmented dermatofibrosarcoma protuberans. Benign tumors, tumors that do not form metastases and does not invade and destroy adjacent normal tissue, innocent tumors. Blood

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tumors term sometimes used to denote an aneurysm, hemorrhagic cyst, or hematoma. Borderline ovarian tumors an ovarian surface epithelial tumors in which the growth pattern is intermediate between benign and malignant; includes mucinous, serous, endometrioid, and Brenner tumors of the ovary; highly curable but may recur after surgical removal, low malignant potential tumors. Brenner tumors a relatively infrequent benign neoplasm of the ovary, consisting chiefly of fibrous tissue that contains nests of cells resembling transitional type epithelium, as well as gland-like structures that contain mucin; origin is controversial, but it may arise from the Walthard cell rest; ordinarily found incidentally in ovaries removed for other reasons, especially in postmenopausal women. Brooke tumors, trichoepithelioma, brown tumors a mass of fibrous tissue containing hemosiderin-pigmented macrophages and multinucleated giant cells, replacing and expanding part of a bone in primary hyperparathyroidism. Calcifying epithelial odontogenic tumors a benign epithelial odontogenic neoplasm derived from the stratum intermedium of the enamel organ; a painless, slowly growing, mixed radiolucent-radiopaque lesion characterized histologically by cords of polyhedral epithelial cells, deposits of amyloid, and spherical calcifications, Pindborg tumors. Carcinoid tumors a usually small, slow-growing neoplasm composed of islands of rounded, oxyphilic, or spindle-shaped cells of medium size, with moderately small vesicular nuclei, and covered by intact mucosa with a yellow cut surface; neoplastic cells are frequently palisaded at the periphery of the small groups, and the latter have a tendency to infiltrate surrounding tissue. Such neoplasms occur anywhere in the gastrointestinal tract (and in the lungs and other sites), with approximately 90% in the appendix and the remainder chiefly in the ileum, but also in the stomach, other parts of the small intestine, the colon, and the rectum; those of the appendix and small tumors seldom metastasize, but

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reported incidences of metastases from other primary sites and from tumors exceeding 2.0 cm in diameter vary from 25–75%; lymph nodes in the abdomen and the liver may be conspicuously involved, but metastases above the diaphragm are rare. Carcinoid syndrome, carotid body tumors, chemodectoma. Cellular tumors, tumors composed mainly of closely packed cells. Cerebellopontine angle tumors, vestibular schwannoma. Chromaffin tumors, chromaffinoma. Codman tumors chondroblastoma of the proximal humerus. Collision tumors two originally separate tumors, especially a carcinoma and a sarcoma, that appear to have developed by chance in close proximity, so that an area of mingling exists, carcinosarcoma. Connective tumors any tumors of the connective tissue group, such as osteoma, fibroma, and sarcoma. Dermal duct tumors a benign small tumors derived from the intradermal part of eccrine sweat gland ducts occurring often on the head and neck. Dermoid tumors, dermoid cysts, desmoid tumors, desmoplastic small cell tumors a high-grade malignant tumors found most often in the abdomen of adolescent males; typically tumors cells contain both desmin and keratin, i.e., show hybrid features like fetal mesothelial cells; the exact nature of these cells remains unknown. Dysembryoplastic neuroepithelial tumors a rare low-grade neoplasm most frequently seen in children and associated with seizures and cortical dysplasia, the often multinodular, multicystic tumors is composed of oligodendroglial-like cells with accompanying neurons. Eighth nerve tumors, vestibular schwannoma. Embryonal tumors, embryonic tumors a neoplasm, usually malignant, which arises during intrauterine or early postnatal development from an organ rudiment or immature tissue; it forms immature structures characteristic of the part from which it arises, and may form other tissues as well. The term includes neuroblastoma and Wilms tumors, and is also used to include certain neoplasms presenting in later life, this usage being based on

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the belief that such tumors arise from embryonic rests. Teratoma, embryoma, embryonal tumors of ciliary body, embryonal medulloepithelioma. Endocervical sinus tumors malignant germ cell tumors commonly found in the ovary. The tumor arises from primitive germ cells and develops into extra-embryonic tissue resembling the yolk sac, yolk sac carcinoma. Endodermal sinus tumors a malignant neoplasm occurring in the gonads, in sacrococcygeal teratomas, and in the mediastinum; produces α -fetoprotein and is thought to be derived from primitive endodermal cells, yolk sac tumors. Endometrioid tumors a tumors of the ovary containing epithelial or stromal elements resembling tumors of the endometrium. Erdheim tumors, craniopharyngioma, Ewing tumors a malignant neoplasm which occurs usually before the age of 20 years, about twice as frequently in males, and in about 75% of patients involves bones of the extremities, including the shoulder girdle, with a predilection for the metaphysis; histologically, there are conspicuous foci of necrosis in association with irregular masses of small, regular, rounded, or ovoid cells (2–3 times the diameter of erythrocytes), with very scanty cytoplasm, endothelial myeloma, Ewing sarcoma. Fecal tumors, fecaloma, fibroid tumors old term for certain fibromas and leiomyomas. Gastrointestinal autonomic nerve tumors benign or malignant tumors of stomach and small intestine histogenetically related to myenteric plexus; may be familial and related to gastrointestinal neuronal dysplasia. Gastrointestinal stromal tumors benign or malignant tumors composed of unclassifiable spindle cells; immunohistochemically distinct from smooth muscle and Schwann cell tumors. Giant cell tumors of bone a soft, reddish-brown, sometimes malignant, osteolytic tumors composed of multinucleated giant cells and ovoid or spindle-shaped cells, occurring most frequently in an end of a long tubular bone of young adults, giant cell myeloma, osteoclastoma. Giant cell tumors of tendon sheath a nodule, possibly

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inflammatory in nature, arising commonly from the flexor sheath of the fingers and thumb; composed of fibrous tissue, lipid- and hemosiderin-containing macrophages, and multinucleated giant cells, localized nodular tenosynovitis. Glomus tumors, a vascular neoplasm composed of specialized pericytes (sometimes termed glomus cells), usually in single encapsulated nodular masses that may be several millimeters in diameter and occur almost exclusively in the skin, often subungually in the upper extremity; it is exquisitely tender and may be so painful that patients voluntarily immobilize an extremity, sometimes leading to atrophy of muscles; multiple glomus tumors occur, sometimes with autosomal dominant inheritance. Tumors with cavernous spaces lined by glomus cells are called glomangiomas. Glomus jugulare tumors a glomus tumors arising from the jugular glomus and usually presenting initially in the hypotympanum. Glomus tympanicum tumors a glomus tumors arising on the medial wall of the middle ear. Godwin tumors, benign lymphoepithelial lesion. Granular cell tumors a microscopically specific, generally benign tumors, often involving peripheral nerves in skin, mucosa, or connective tissue, derived from Schwann cells; the abundant cytoplasm contains lysosomal granules, the cells infiltrate between adjacent tissues although growth is slow, and adjacent surface epithelium may show hyperplasia. Granulosa cell tumors a benign or malignant tumors of the ovary arising from the membrana granulosa of the vesicular ovarian (graafian) follicle and frequently secreting estrogen; it is soft, solid, white or yellow, and consists of small round cells sometimes enclosing Call-Exner bodies; larger lipid-containing cells may be present, folliculoma, Grawitz tumors old eponym for renal adenocarcinoma, heterologous tumors a tumors composed of a tissue unlike that from which it springs. Hilar cell tumors of ovary, steroid cell tumors. Histoid tumors old term for a tumors composed of a single type of

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differentiated tissue. Homologous tumors, a tumors composed of tissue of the same sort as that from which it springs, innocent tumors, benign tumors, interstitial cell tumors of testis, Leydig cell tumors. Islet cell tumors an endocrine tumors composed of cells equivalent or related to those in the normal islet of Langerhans; may be benign or malignant; usually hormonally active; comprises insulinomas, glucagonomas, vipomas, somatostatinomas, gastrinomas, pancreatic polypeptide-secreting tumors, and multihormonal or hormonally inactive pancreatic islet cell tumors. Juxtaglomerular cell tumors a tumors of juxtaglomerular cell origin usually presenting with symptoms of secondary aldosteronism, including severe diastolic hypertension, which appears to be due to tumors-produced renin. The histological appearance resembles that of a hemangiopericytoma. Klatskin tumors adenocarcinoma located at the bifurcation of the common hepatic duct, Krukenberg tumors a metastatic carcinoma of the ovary, usually bilateral and secondary to a mucous carcinoma of the stomach, which contains signet-ring cells filled with mucus. Landschutz tumors a transplantable, possibly isoantigenic, highly virulent neoplasm which can be grown in any strain of mice; the host is killed in a few days by what is apparently an anaplastic carcinoma. Leydig cell tumors a testicular and, less commonly, ovarian neoplasm composed of Leydig cells, usually benign but may be malignant; may secrete androgens or estrogens, interstitial cell tumors of testis. Lindau tumors, hemangioblastoma, low malignant potential tumors, borderline ovarian tumors. Malignant tumors a tumors that invades surrounding tissues, is usually capable of producing metastases, may recur after attempted removal, and is likely to cause death of the host unless adequately treated. Malignant mixed Müllerian tumors (MMMT), mixed mesodermal tumors. Melanotic neuroectodermal tumors of infancy a benign neoplasm of neuroectodermal origin that most often involves the anterior

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maxilla of infants in the first year of life. It presents clinically as a rapidly growing blue-black lesion producing a destructive radiolucency; histologically, it is characterized by small, round, undifferentiated tumors cells interspersed with larger polyhedral melanin-producing cells arranged in an alveolar configuration, melanoameloblastoma, pigmented ameloblastoma, pigmented epulis, progonoma of jaw, retinal anlage tumors. Merkel cell tumors a rare malignant cutaneous tumors seen in sun-exposed skin of elderly patients composed of dermal nodules of small round cells with scanty cytoplasm in a trabecular pattern; the tumors cells contain cytoplasmic dense core granules resembling neurosecretory granules seen in Merkel cells, primary neuroendocrine carcinoma of the skin, trabecular carcinoma, mesonephroid tumors, mesonephroma, mixed tumors, a tumors composed of two or more varieties of tissue, mixed mesodermal tumors a sarcoma of the body of the uterus arising in older women, composed of more than one mesenchymal tissue, especially including striated muscle cells, malignant mixed Müllerian tumors. Mixed tumors of salivary gland a tumors composed of salivary gland epithelium and fibrous tissue with mucoid or cartilaginous areas, pleomorphic adenoma. Mixed tumors of skin, chondroid syringoma. Mucoepidermoid tumors, mucoepidermoid carcinoma. Nelson tumors a pituitary tumors causing the symptoms of Nelson syndrome, oil tumors, lipogranuloma, oncocytic hepatocellular tumors, fibrolamellar liver cell carcinoma, organoid tumors a tumors of complex structure, glandular in origin, containing epithelium, connective tissue, etc. Pancoast tumors any carcinoma of the lung apex causing the Pancoast syndrome by invasion or compression of the brachial plexus and stellate ganglion, superior pulmonary sulcus tumors. Papillary tumors, papilloma, paraffin tumors, paraffinoma, phantom tumors accumulation of fluid in the interlobar spaces of the lung, secondary to congestive heart failure,

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radiologically simulating a neoplasm. Phyllodes tumors a spectrum of neoplasms consisting of a mixture of benign epithelium and stroma with variable cellularity and cytologic abnormalities, ranging from benign phyllodes tumors to cytosarcoma phyllodes; most often involves the breast tumors pilar tumors of scalp a solitary tumors of the scalp in elderly women that may ulcerate; microscopically resembles squamous cell carcinoma composed of glycogen-rich clear cells, but is benign, proliferating tricholemmal cyst tumors Pindborg tumors, calcifying epithelial odontogenic tumors. Pinkus tumors, fibroepithelioma. Placental site trophoblastic tumors a tumors usually arising in the uterus of parous women during reproductive years. Histologically, the tumors consist of a predominance of intermediate trophoblastic cells with fibrinoid material and vascular invasion. Pontine angle tumors a tumors in the angle formed by the cerebellum and the lateral pons, often refers to an acoustic schwannoma. Potato tumors of neck a firm nodular mass in the neck, usually a carotid body tumors (chemodectoma). Pregnancy tumors, granuloma gravidarum, primitive neuroectodermal tumors a designation used to refer to a group of morphologically similar embryonal neoplasms that arise in intracranial and peripheral sites of the nervous system and which may show various degrees of cellular differentiation; includes medulloblastoma, pineoblastoma, etc. ranine tumors, ranula, Rathke pouch tumors, craniopharyngioma. Retinal anlage tumors, melanotic neuroectodermal tumors of infancy. Rous tumors, Rous sarcoma. Sand tumors, psammomatous meningioma. Sertoli cell tumors a tumors of testis or ovary composed of Sertoli cells; most often benign but may be malignant tumors Sertoli-Leydig cell tumors an ovarian tumors composed of Sertoli and Leydig cells; may secrete androgens, arrhenoblastoma, gynandroblastoma. Sertoli-stromal cell tumors a generic term for ovarian sex-cord stromal tumors composed of Sertoli cells, Leydig cells, and cells resembling

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rete epithelial cells, either in a pure form or as a mixture of these cell types. Solitary fibrous tumors a benign tumors of fibrous tissue that usually arises in the pleural space on other sites, benign mesothelioma. Squamous odontogenic tumors a benign epithelial odontogenic tumors thought to arise from the epithelial cell rests of Malassez; appears clinically as a radio lucent lesion closely associated with the tooth root and histologically as islands of squamous epithelium enclosed by a peripheral layer of flattened cells. Steroid cell tumors a collective term used for ovarian tumors composed of cells resembling steroid-secreting lutein cells; comprises several tumors such as stromal luteoma, Leydig cell tumors, steroid cell tumors not otherwise specified; hormonally active; may be benign or malignant tumors, hilar cell tumors of ovary. Sugar tumors a benign clear cell tumors of the lung containing abundant glycogen. Superior pulmonary sulcus tumors, Pancoast tumors, teratoid tumors, teratoma, theca cell tumors, thecoma. Triton tumors a peripheral nerve tumors with striated muscle differentiation, seen most often in neurofibromatosis; named after the Masson theory of transformation of motor nerve fibers into muscle in triton salamanders. Turban tumors multiple cylindromas of the scalp which, when overgrown, may resemble a turban, villous tumors, villous papilloma, Warthin tumors, adenolymphoma, Wilms tumors a malignant renal tumors of young children, composed of small spindle cells and various other types of tissue, including tubules and, in some cases, structures resembling fetal glomeruli, and striated muscle and cartilage. Often inherited as an autosomal dominant trait, nephroblastoma, yolk sac tumors, endodermal sinus tumors, Zollinger-Ellison tumors a non-beta cell tumors of pancreatic islets causing the Zollinger-Ellison syndrome." Since Applicantrs have no working examples of any tumor treatment in any kind of cell in the

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specification, why would they believe they possess enablement for treating all the diseases listed above?

Not only that applicants claim 22 is drawn to osteoporosis and inflammation which has not been even assayed by the applicants.

In re Fisher 166 USPQ 18 states:-

*It is apparent that such an inventor should be allowed to dominate the future patentable inventions of others where those inventions were based in some way on his teachings. Such improvements, while unobvious from his teachings, are still within his contribution, since the improvement was made possible by his work. It is equally apparent, however, that he must not be permitted to achieve this dominance by claims which are insufficiently supported and hence not in compliance with the first paragraph of 35 U.S.C. 112. That paragraph requires that the scope of the claims must bear a reasonable correlation to the scope of enablement provided by the specification to persons of ordinary skill in the art. In cases involving predictable factors, such as mechanical or electrical elements, a single embodiment provides broad enablement in the sense that, once imagined, other embodiments can be made without difficulty and their performance characteristics predicted by resort to known scientific laws. **In cases involving unpredictable factors, such as most chemical reactions and physiological activity, the scope of enablement obviously varies inversely with the degree of unpredictability of the factors involved.***

Applicants further argue that As disclosed in page 19 of the specification, the diaryl ureas of this invention can be derived from substituted anilines. One skilled in the art would recognize that the substituted anilines needed to make the compounds of claims 1-15, if not commercially available, could be prepared by methods known in the art. The specification discloses on page 15, lines 20-23 that substituted anilines needed to prepare compounds of the invention could be prepared by text book chemistry, such as the text book methods disclosed in *Advanced Organic Chemistry*, 3rd Edition, John Wiley, 1985. In addition, on page 65 of the specification under the heading,

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D5. General Method for the Deprotection of N-(co-Silyloxyalkyl)amides. Synthesis of N-(4-Chloro-3-((trifluoromethyl)phenyl)-N'-(4-(4-(2-(N-(2-hydroxy)ethylcarbamoyl)pyridyloxyphenyl) Urea, the use and removal of protective groups which results in a hydroxy group on a compound with a similar structure to those of claims 1-15 is disclosed. Based on these disclosures, the specification clearly enables those skilled in the art to make the compounds of claims 1-15.

It is also not easy to make compounds, even protecting and deprotecting of groups can be very involved and can take years of experimentation for one of skill in the art.

See page 41 of the Side Reactions by F. Dorwald.

Even as of 2006, it is known how difficult it is to synthesize compounds.

As stated in the preface to a recent treatise:

"Most non-chemists would probably be horrified if they were to learn how many attempted syntheses fail, and how inefficient research chemists are. The ratio of successful to unsuccessful chemical experiments in a normal research laboratory is far below unity, and synthetic research chemists, in the same way as most scientists, spend most of their time working out what went wrong, and why. Despite the many pitfalls lurking in organic synthesis, most organic chemistry textbooks and research articles do give the impression that organic reactions just proceed smoothly and that the total synthesis of complex natural products, for instance, is maybe a labor-intensive but otherwise undemanding task. In fact, most syntheses of structurally complex natural products are the result of several years of hard work by a team of chemists, with almost every step requiring careful optimization. The final synthesis usually looks quite different from

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that originally planned, because of unexpected difficulties encountered in the initially chosen synthetic sequence. Only the seasoned practitioner who has experienced for himself the many failures and frustrations which the development (sometimes even the repetition) of a synthesis usually implies will be able to appraise such workChemists tend not to publish negative results, because these are, as opposed to positive results, never definite (and far too copious) " Dorwald F. A.

Side Reactions in Organic Synthesis, 2005, Wiley: VCH, Weinheim pg. IX of Preface.

In chapter 1, page 9 he states.

§ 7 Examples of closely related starting materials which upon treatment with the same reagents yield completely different products are sketched in Scheme 1.6. The additional methyl group present in the second starting material slows addition to the carbonyl group of the radical formed by ring scission of the cyclobutane ring, and thus prevents ring expansion to the cyclohexanone. Removal of the methoxycarbonyl group leads to cleavage of a different bond of the cyclobutane ring and thereby again to a different type of product [12].

Page 41 of the reference also talks about incompatible functional groups , and protecting and deprotecting these groups I a multistep synthesis is not easy.

Thus the activity as well as how to make the full scope of the compounds is not enabled.

In re Kirk, 153 USPQ 48. If you the "public" find that it works, I claim it, is not a proper basis of patentability.

Genetech Inc Vs Nova Nordisk 42 USPQ 2d 1001.

"A patent is not a hunting license. It is not a reward for search but compensation for its successful conclusion and patent protection is granted in return for an enabling disclosure of an invention , not for vague intimations of general ideas that may or may not be workable."

MPEP 2164.01(a) states, "A conclusion of lack of enablement means that, based on the evidence regarding each of the above factors, the specification, at the time the application was filed, would not have taught one skilled in the art how to make and/or use the full scope of the claimed invention without undue experimentation. In re Wright, 999 F.2d 1557,1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993)." That conclusion is clearly justified here. Thus, undue experimentation will be required to practice Applicants' invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita J. Desai whose telephone number is 571-272-0684. The examiner can normally be reached on Monday - Friday, flex time..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Rita J. Desai
Primary Examiner
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R. Desai
11/14/07

R.D.

November 12, 2007